Temagami District Fisheries Management Plan 1987–2000

Background Information and Optional Management Strategies and Tactics

A Summary

Ministry of Natural Resources
Ontario

Hon. Vincent G. Kerrio
Minister

Mary Mogford
Deputy Minister

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this management plan is to identify how the fisheries resource within Temagami District will be managed to the year 2000. The final plan will be reviewed on a five year basis beginning in 1990.

The District Land Use Guidelines (D.L.U.G.) outlines targets and objectives for fisheries management. The Fisheries Management Plan (F.M.P.) will indicate exactly how the Ontario Ministry of Natural Resources will meet those objectives.

Specific work plans will be developed from the priorities established in the F.M.P., on an annual basis.

This report has been prepared for public distribution in order to summarize fisheries data contained in the detailed background document. It will outline problems and issues affecting the resource in Temagami District and identify potential strategies for managing the local fisheries. The public is invited to provide input on the accuracy of the information contained herein and on the acceptability of the management strategies and tactics. Public comment will be considered in the evaluation and selection of preferred management options.

1.2 FISHERIES MANAGEMENT PLANNING PROCESS

Fisheries Management Planning consists of six stages.

The initial phase involved the preparation of terms of reference which guide the planning process and provide a timetable for the completion of each succeeding stage.

The next two phases involve a thorough analysis of all existing Temagami District fisheries data and the preparation of a comprehensive background report. The Detailed Background Report describes the resource and examines the balance of supply and demand as it applies to the district fisheries. It also identifies management issues and targets. A copy of the background report is available for review at the District Office and will also be on display at public consultations.

The fourth stage of the planning process involves the preparation of this document, the purpose of which is described above.

Following public consultation on this report, a draft management plan will be prepared. The draft plan will receive both internal and public review prior to the completion of the Temagami District Fisheries Management Plan in the Fall of 1987.

2.0 BACKGROUND INFORMATION

2.1 THE RESOURCE BASE

2.1.1 PERSPECTIVE

The Temagami administrative district is one of seven districts in the Northeastern Region (Map 1). It is bordered by the M.N.R. districts of Kirkland Lake on the north, Sudbury on the west, North Bay on the south and by Lake Timiskaming and the province of Quebec to the east.

The District (Map 2) encompasses an area of 6,900 square kilometers of which 17 percent (1,181 km2) is water.

Approximately 91% of the District is held by the Crown. The remaining 9% is held under various forms of land tenure, primarily patents.

The District Land Use Guidelines estimated the total permanent population within the District to be 16,740.

The majority of the populace (91%) resides in the northeast corner of the district in the towns of New Liskeard, Haileybury, Cobalt and Latchford.

The remaining 9 percent reside in the Township of Temagami and in unorganized townships.

The Teme-Augama Anishnabi people reside on the Bear Island Indian Reserve, situated in the center of Lake Temagami.

The District is located entirely within the Great Lakes - St. Lawrence primary watershed and is divided into four tertiary watersheds. The Blanche River, Montreal River and Lake Timiskaming watersheds flow south via the Ottawa River to the St. Lawrence River. The Sturgeon River watershed flows into Lake Huron via Lake Nipissing.

Stream gradients tend to be moderate in the northwest and oblique in the east and south. Waterfalls and rapids are frequent wherever bedrock is close to the surface.

A good variety of fish habitat is provided by variable lake morphometry found in the District. Many of the larger waterbodies are deep coldwater lakes with bedrock basins. A substantial portion of small waterbodies are pothole lakes in various stages of eutrophication.

Lake Timiskaming (29,507.2 ha) and Lake Temagami (20,971.7 ha) are the largest warmwater and coldwater lakes respectively, in the District. Coldwater systems contain trout species, warmwater systems do not.

The Montreal (93.0 km) and Lady Evelyn (48.3 km) are the two most important river systems.

2.1.2 THE RESOURCE

There are 2,092 lakes and 586 rivers and streams in Temagami District, with a combined surface area of 118,138.8 ha. (Table 1). The total

MAP 1

PROVINCIAL AND REGIONAL SETTING OF TEMAGAMI DISTRICT

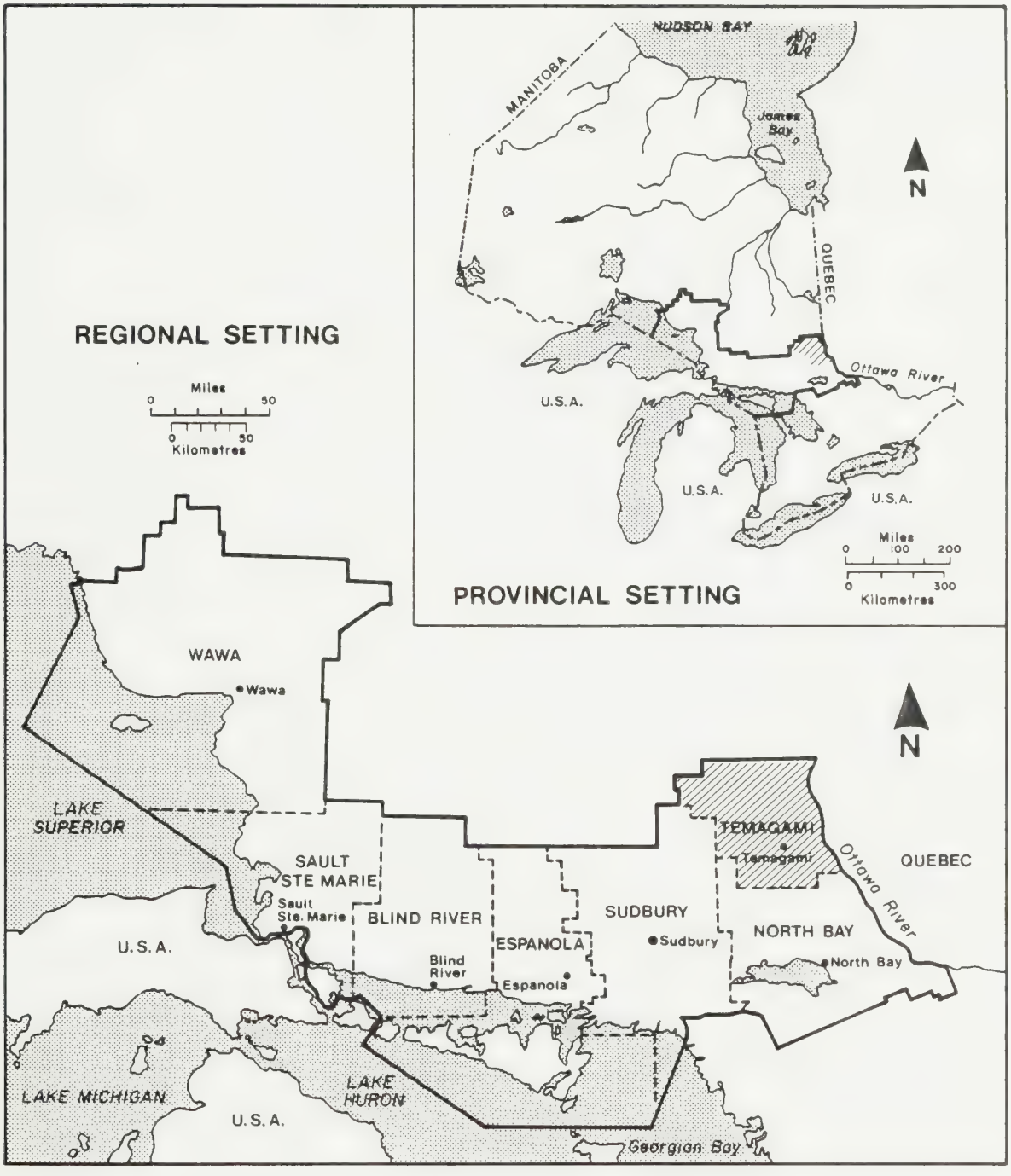
Temagami District

District Administrative Boundary

Northeastern Region Administrative Boundary

Provincial Boundary

International Boundary



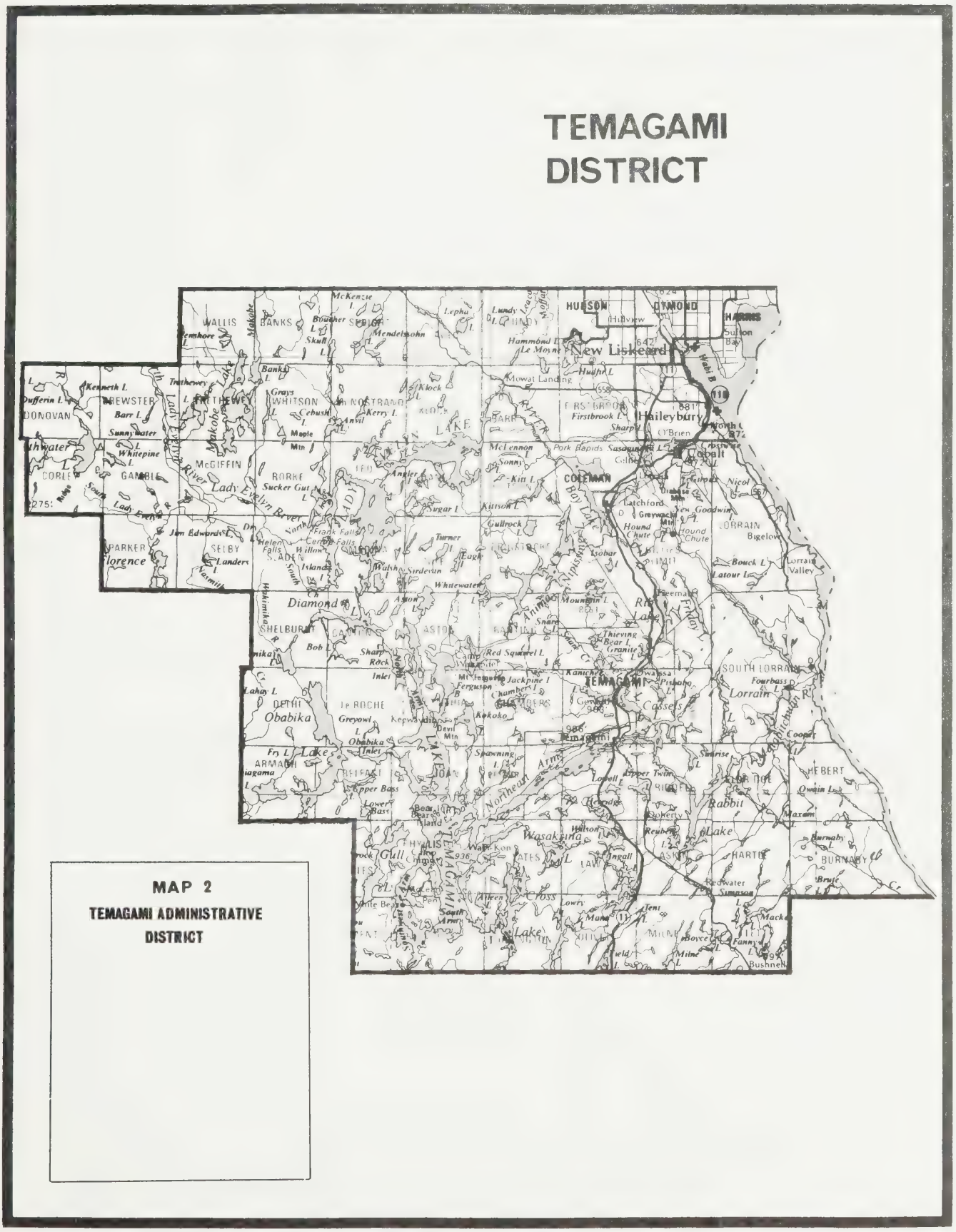
TEMAGAMI DISTRICT

LEGEND

N

Miles 10 0 10

Kilometres 10 0 10



MAP 2

TEMAGAMI ADMINISTRATIVE DISTRICT

TABLE 1 SUMMARY OF FISHERIES RESOURCE DATA

				Allowable Yield by Species and Species Assemblage (kg/yr) (Productive Waters Only								
	Number	Area (ha)	Estimated Total Potential Yield of Productive Waters (kg/yr)	lake trout	brook trout	rainbow trout	splake	walleye/ sauger	n. pike	small mouth bass	lake whitefish	Total
INLAND LAKES												
Coldwater	* 203	* 51,914.2	116,200	21,300	1,800	200	100	10,700	8,200	12,900	8,500	63,700
Warmwater	+ 220	+ 50,200.0	143,300	-	-	-	-	38,300	13,200	9,400	200	61,100
STREAMS												
Coldwater	46	57.8 ha (283.3 km)	500	-	100	N/A	-	-	-	-	-	100
Warmwater	46	2,087.1 ha (227 km)	7,200	-	-	-	-	2,200	1,100	1,100	-	4,400
Unknown/Unsurveyed												
Lakes	1,513	10,052.8	28,600	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A
Streams	494	833.5 km	?	-	N/A	-	-	N/A	N/A	N/A	-	N/A
Unsurveyed Lakes With Little Or No Biological Potential	156	3,826.9	-	-	-	-	-	-	-	-	-	-
Total Lakes	2,092	118,138.8	295,800	21,300	1,900	200	100	51,200	22,500	23,400	8,700	129,300
Rivers/Streams	586											

* Includes 48 lakes producing below full biological potential
\+ Includes 23 lakes producing below full biological potential

NA: No data available

potential yield (Yp) of all fish or the weight of fish which can be removed from district waters on a sustained basis, is 295,800 kg/yr.

Potential yields for each waterbody have been partitioned amongst each sportfish species present. The resulting allowable yields (Ya) represent the weight of sportfish, by species, which can be annually removed from waterbodies. Total allowable yields are illustrated in figure 1 and have been broken down by waterbody type in table 1.

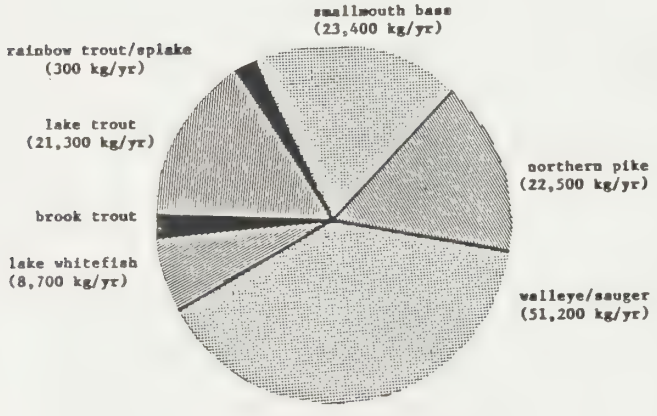


Fig. 1 Allowable yields (kg/yr) by sportfish species in Temagami District waters

There are 227 district lakes which are not producing to their full potential due to acid sensitivity, low dissolved oxygen levels, mine tailing contamination, failures in stocking efforts or in which a natural absence of gamefish species occurs.

No underproducing waters are included in district potential yield and allowable yield totals. Underproducing lakes account for 9.0% of the total surface area and represent a loss in potential yield, of 27,200 kg/yr.

203 lakes (43.9% of the district surface area) have been identified as coldwater lakes suitable for the survival of salmonid species.

Lake trout inhabit 93 lakes (Appendix 1) however 11 of these are presently underproducing (Sec. 2.4). The allowable yield of lake trout represents 16.5% of the District total. Since the preparation of D.L.U.G. three new lake trout populations have been discovered in unsurveyed lakes in Riddell, Shelburne and Vogt townships.

Brook trout populations occur naturally in 40 lakes and in 40 district streams. Brook trout are stocked in 27 lakes and 4 streams (Appendix 2).

Rainbow trout populations are artificially maintained by stocking in 6 lakes.

Splake, a fast growing lake trout - brook trout hybrid, have successfully been introduced into three district lakes.

Several lakes in Gamble township were once productive aurora trout waters, however an increased level of acid deposition during the last two decades was responsible for their disappearance. Recent improvements in water quality in these lakes indicate that reintroductions of aurora trout could once again create self-sustaining populations.

Lake whitefish are common in many coldwater lakes and are actively sought by anglers in five lakes. The estimated allowable yield of 8,700 kg/yr is based solely upon these five lakes. The total potential for whitefish harvest from district lakes is huge and represents an underutilized portion of the resource.

Lake herring (cisco) provide anglers with a coldwater fishing alternative in many district lakes.

There are 220 warmwater lakes in the district, or 42.5% of the district surface area. Walleye, sauger, northern pike and smallmouth bass are the main warmwater sportfish species. Yellow perch, rock bass and burbot are also common in many lakes.

Sauger are present only in the Lake Timiskaming watershed.

Walleye and sauger combined make up 39.5% of the district total allowable yield (51,200 kg/yr).

2.2 RESOURCE USE AND PROJECTIONS

i) a) Angling : Pressure

Creel surveys, aerial recreation surveys and estimates by Temagami District O.M.N.R. staff were utilized in order to estimate the fishing pressure for the District. A total of 144,500 angler days* were spent on district lakes. The majority of this pressure (73.7%) was expended during the open water fishing season.

Local anglers, residing within 50 km of the waterbody being fished, make up 44.6% of the angling pressure.

Ontario residents are responsible for 34.4% of the total angling pressure.

Non-residents account for the remaining 21.0% of district anglers. The 1980 Federal-Provincial Angler Survey indicated that the majority of non-resident anglers live in Indiana, New York, Ohio, Pennsylvania and in the Province of Quebec.

Lake Timiskaming and Lake Temagami are the most heavily fished lakes in the District, accounting for 34.3% (49,500 angler days) and 16.0% (23,100 angler days) of the total pressure respectively.

* one angler day = four hours of active fishing by a single angler using a single line.

Projected increases in resident fishing pressure are based upon district, regional and provincial population projections to the year 2001, provided by the Ministry of Treasury and Economics.

An anticipated increase of 25%, in non-resident use was assumed.

The estimated total number of angler days expected in Temagami District by the year 2000 will be 155,100, an increase of 7.4%.

i) b) Angling : Harvest

Sportfish harvest estimates are based upon summer and winter creel survey data extrapolated to cover the entire district.

The total annual harvest for the District is 62,600 kg.

Walleye and sauger make up 51.7% of the total harvest (Fig. 2). Timiskaming is the largest contributing lake to the harvest of these species. An estimated 23,300 kg. of walleye and sauger were harvested from Lake Timiskaming in 1985.

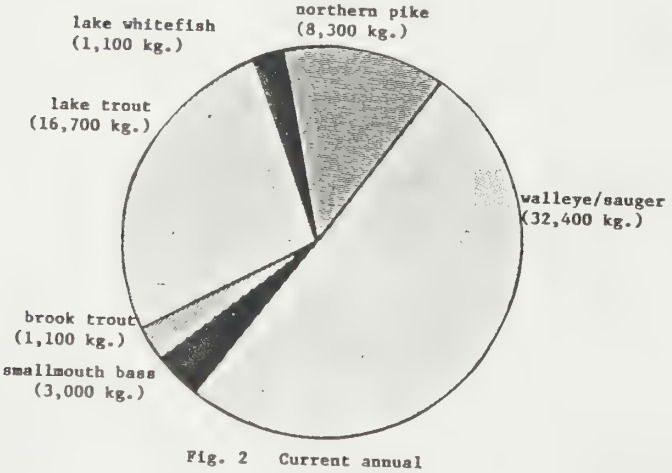


Fig. 2 Current annual gamefish harvest in Temagami District (1986)

An estimated 16,700 kg. of lake trout are caught annually, or 26.7% of the district harvest of sportfish. Lake Temagami is responsible for 8,000 kg (47.9%) of all lake trout kept by anglers.

Thirteen percent of the District harvest is northern pike, 4.8% is smallmouth bass, 1.8% is brook trout and 1.8% is lake whitefish.

No current harvest data exists for splake and rainbow trout.

Projected sportfish harvests to the year 2000, are based upon the anticipated 7.4% increase in angling pressure. Accordingly the total sport fish harvest in the year 2000 is expected to be 67,300 kg.

ii) Bait Fishery

The baitfish industry is the sole commercial fishing interest in Temagami District

Baitfish licences are issued on a township basis.

The 29 commercial licence holders harvested an estimated 24,800 dozen baitfish in 1985, generating a revenue of $44,000. An additional $30,000 was generated through baitfish sales by seven dealer's licence holders.

The estimated harvest of baitfish in the year 2000 will be 26,700 dozen, based upon projected angling pressure increases.

iii) Tourist Operators

There are 51 tourist establishments in the District, which cater specifically to anglers or offer special fishing packages to vistors. The majority of these tourist camps are located along Highway #11 or on Lake Temagami. Other notable concentrations exist on Anima Nipissing Lake, Lady Evelyn Lake and along the Montreal River. There are also 15 commercially owned outpost cabins located on various lakes across the District.

Annual direct sales generated by establishments are estimated at between 4.2 and 4.4 million dollars.

In addition to direct sales, guests at these tourist camps contribute an estimated 3.0 million dollars in indirect sales to the local economy, annually.

iv) Subsistence Fishery

The O.M.N.R. has no record of sportfish harvests by native fishermen. This component of the district harvest remains unknown.

In 1973 cautions were filed by the Temagami Indian people pursuant to the Land Titles Act.

An action is currently proceeding in the Appeal Division of the Supreme Court of Ontario to determine the right, title or interest of the Crown and the Temagami Indian people to 10,360 square kilometers affected by the cautions.

Pending the settlement of this issue no allocation of the District fisheries resource to the native fishery has been or will be made.

2.3 PRESENT MANAGEMENT PRACTICES

A major component of the District's fisheries management programme is the review of and input to plans and proposals which may affect the fisheries resource. These include forest management plans, Environmental Assessments, municipal plans, Provincial Park Management Plans, subdivision and severence proposals, drainage plans, proposals for energy transmission corridors, applications under the Lakes and Rivers Improvement Act and proposals for road or highway construction and maintenance.

A District Roads Committee has been formed to co-ordinate access road activities. The committee is responsible for preparing a comprehensive inventory of all existing and proposed primary and secondary roads, annually projecting and priorizing future road construction and maintenance activities including costs and developing use management strategies for all roads.

Public input will be sought on the development of use management strategies for access roads. The inventory and projections will be available for inspection by the public upon request. A fisheries staff representative serves the District Roads Committee.

Access requirements and concerns which are identified during the fisheries management planning process will be used to provide input to the Roads Committee and to Timber Management Plans during their preparation (particularly when proposing conditions on tertiary roads within identified areas of concern).

Information about fisheries populations, harvests and habitats is essential for good management of the resource. Information gathering in the District has included lake and stream habitat inventories, netting surveys, stocking assessment projects, spawning bed mapping, work site inspections, creel survey projects and monitoring for contaminants such as mercury. Most of the above mentioned programmes have concentrated on either the District's most heavily-fished waterbodies, on lakes where a problem was suspected, or where waters were being considered for stocking or other specific management programmes.

Enforcement is also a key component of the District's fisheries management programme. There are three full-time Conservation Officers, and one Conservation/Outdoor Recreation Officer in the District who work on both fisheries and wildlife enforcement.

Fisheries enforcement effort by these officers is approximately 428 man-days annually. Control of exploitation and protect of spawning fish is emphasized. Control of the harvest has also been achieved through the use of seasons, sanctuaries, gear restrictions, live bait restrictions and catch limits.

Stocking is probably the fisheries management activity which is most familiar to the general public. Stocking has been used to introduce new species to waterbodies, to supplement existing populations and to rehabilitate populations which have declined or disappeared. In the past, lake trout and brook trout were the main species stocked, with some stocking of rainbow trout. There were also a few adult transfers of smallmouth bass, northern pike and walleye. More recently there has been additional emphasis on the stocking of walleye and splake. A summary of stocking in the District for the past 6 years is shown in Appendix 2. One Commmunity Fisheries Involvement project (CFIP) has been implemented in the District to rear and stock walleye.

Work has also been done at various locations throughout the District to create or rehabilitate spawning beds. The CFIP group has played a part in this habitat improvement work as well.

A large percentage of fish and wildlife staff time in this District is spent responding to questions, concerns and requests from the public.

This includes providing news releases, publications and brochures, giving talks, discussing problems by phone or in person, and investigating complaints in the field. The Ministry also co-operates with the Ministry of the Environment on contaminant monitoring.

SECTION 2.4 SUPPLY/DEMAND ANALYSIS AND TARGET TESTING

The D.L.U.G. annual sportfish yield target is 79,000 kg/yr. The predicted demand by the year 2000 was estimated to be 53,800 kg/yr (Table 2).

DLUG estimates result in a target surplus of 25,200 kg/yr.

Resource use and harvest estimates calculated in this report are higher then DLUG estimates, but have been based upon a larger potential fish yield, 295,800 kg/yr.

The target surplus is now estimated to be 62,000 kg/yr. This surplus permits the District some flexibility in providing angling and tourism opportunities.

Table 3 summarizes the comparison between current use and projected use estimates.

The projected harvest of baitfish in the district will be 26,700 dozen in the year 2000. No D.L.U.G. target exists for baitfish and no method is available to calculate a maximum sustainable yield. Overharvesting, however, is not expected to become a problem.

The number of angler days spent in the district will rise by 10,600 or 7.3%. The majority of this increase will be in the number of non-resident anglers.

Sportfish harvest will increase 4,700 kg/yr by the year 2000. The target will be to meet this demand by providing a sportfish yield of 67,300 kg/yr.

Table 2 Comparison of D.L.U.G. Fisheries Data (1983) and Fisheries Management Plan Fisheries Estimates (1986)

	DLUG	FMP
Potential Annual Sportfish yield (kg/yr)	79,000	129,300
Present Angler Days	106,000	144,500
Present Sportfish Harvest (kg/yr)	48,000	62,600
Predicted Angler Use (Year 2000) (Angler Days)	119,000	155,100
Predicted Demand (Year 2000) (kg/yr)	53,800	67,300
Sportfish Target Surplus (kg/yr)	25,200	62,000

TABLE 3 TARGET TESTING

	Current Use kg	Current Use angler days	Projected Use kg	Projected Use angler days	DLUG Target (kg)	Resource Based Opportunities (angler days)	Allowable Yield (Ya) kg	Interim Refined Target kg	Interim Refined Target day
Subsistence Fishery			(no available data)		-	-	-	-	-
Commercial Fishery									
Baitfish (doz)	24,800	N/A	26,700	N/A	-	N/A	(?)	26,700	-
Sport Fishery									
Users: Local	N/A	64,500	N/A	64,500					
Residents	N/A	49,700	N/A	52,800					
Non-Residents	N/A	30,300	N/A	37,800					
Total	N/A	144,500	N/A	155,100					
Species Assemblages									
Lake trout	16,700	N/A	17,900	N/A		71,000	21,300		
Brook trout	1,100	N/A	1,200	N/A		6,300	1,900		
Rainbow trout	-	N/A	-	N/A		600	200		
Splake	-	N/A	-	N/A		500	100		
N. pike	8,300	N/A	8,900	N/A		45,100	22,500		
Walleye/Sauger	32,400	N/A	34,800	N/A		102,200	51,200		
S. m. bass	3,000	N/A	3,300	N/A		46,900	23,400		
Lake whitefish	1,100	N/A	1,200	N/A		17,600	8,700		
Total	62,600	144,500	67,300	155,100	79,000	290,200	129,300	67,300	-

No species will be harvested above the calculated allowable yield (Ya). Lake trout, which are currently being harvested at 78.4%.Ya will be harvested at 84.0%.Ya by the year 2000.

Resource based opportunities using provincial quality standards, number 290,200 angler days. This means that the district fisheries resource will provide a surplus of 135,100 angler days in the year 2000. The majority of this surplus can be found in smallmouth bass, northern pike and lake whitefish which are being utilized at a level well below their respective allowable yields.

2.5 PROBLEMS AND ISSUES

Members of the Temagami District Outdoor Recreation staff were consulted in order to establish a list of any problems they may have encountered in the course of their duties, and potential issues and areas of concern identified to them by the public.

During the process of target testing (Sec 2.4) additional problems in sportfish supply and demand became apparent in localized areas. In order to better understand these problems and issues, District waterbodies with common or unique characteristics were grouped into eight zones. (Further detail on the zone concept will be discussed in Section 3.0).

The following list consists of the problems and issues which the M.N.R. perceives to be important to fisheries management in the Temagami District. This list is by no means exhaustive. If, during public consultation, new problems are identified, they will be added and addressed in the draft Fisheries Management Plan.

2.5.1 PROBLEM: LAKE ACCESS

2.5.1 a) Description

Limited accessibility may deter some anglers from utilizing specific areas

Location

1 Baie Jeanne; Lake Temagami (Zone #1)
2 Gull Lake (Zone #5)
3 Sand Dam; Rabbit Lake (Zone #7

2.5.1 b) Description

Improved access has resulted in increased angling pressure on high quality lake trout fisheries. DLUG states; "no additional access or development will be permitted, on A1 lakes and development on A2 lakes is to have minimal fisheries impact." (Appendix 1).

Location

1 Obabika (A2), Zone #5
2 Clearwater (A1), Zone #5
3 Cross (A2), Zone #1
4 Turner (A1), Zone #8

2.5.2. PROBLEM: HABITAT LOSS OR DEGRADATION

2.5.2 a) Description

107 district lakes have been identified as "extremely sensitive to acidification."

Location

Zone #6 (Lady Evelyn River/ Makobe Lake) contains 89 of these lakes, most of which are smaller than 10 ha. The most notable acid sensitive lakes are the following:

1 Banks (A1), Zone #6
2 Big Chief (B1), Zone #6
3 Diamond (A1), Zone #6
4 Justin (C), Zone #6
5 Lady Sidney (B1), Zone #6
6 Lulu (B1), Zone #6
7 Makobe (A1), Zone #6
8 Marina (B1), Zone #6
9 Niccolite (A1), Zone #6
10 Smith (A1), Zone #6
11 Smoothwater (A1), Zone #6
12 Aston (w.w.), (investigation necessary) Zone #8

2.5.2 b) Description

Water level fluctuations caused by dams may result in loss of potential spawning substrate left above water at certain times of the year.

Drainage to spawning shoals may cause siltation of substrate, reducing hatching success.

Location

1 Rabbit (lake trout) Zone #7
2 Fourbass (lake trout) Zone #8
3 Lady Evelyn (walleye, n. pike) Zone #7
4 Lower Montreal R. (n.pike) Zone #4
5 Cassels (lake trout) Zone #7
6 Snake Island (walleye, n. pike) Zone #7

2.5.2 c) Description

Blockage of brook trout streams by beaver dams or log jams denies fish access to suitable habitat, limiting angling opportunities

Location

1 Darwin Creek, Zone #4
2 Friday Creek, Zone #8
3 Hudfir Creek, Zone #4

2.5.3 PROBLEM: OVERHARVEST OF SPORTFISH

2.5.3 a) Description

Specific lakes have been identified by Conservation Officers and other field staff on which angling returns have diminished in recent years, apparently due to heavy fishing pressure. This is based upon personal observation and demands confirmation with scientific data before remedial actions can be taken.

Location

1 Red Squirrel, Zone #8
2 Chambers, Zone #8
3 Clearwater, Zone #5
4 Ross, Zone #8
5 Burwash, Zone #8
6 Maxam, Zone #8
7 Wasaksina, Zone #7
8 Herridge, Zone #7
9 Field, Zone #7
10 Small unnamed lakes, Milne Township, Zone #7

2.5.3 b) Description

During target testing, local shortages in particular sportfish species were identified in certain zones. In other words, the MNR perceives the demand in these areas as outweighing supply.

Location

1 Zone #4 (Tri-Towns): A deficit of brook trout and lake trout exists. The total area of available coldwater habitat is a limiting factor.

2 Zone #7 (Highway #11): A deficit of stocked brook trout, easily accessible to anglers, has been identified

3 Zone #5 (Highway #805): Creel Survey data indicates that lake trout are being harvested close to the allowable yield in this particular zone. Further investigation is warranted.

2.5.3 c) Description

It has become apparent that changes may be occurring in the fish community structure in Lake Timiskaming.

Average summer catches, which consisted of 88.5% walleye and 5.3% sauger in 1979, are now 70.2% and 22.4%, respectively.

Catch-per-unit efforts during the open water fishing season reflect the same changes.

Creel survey data indicates that the present walleye harvest is exceeding the calculated allowable yield.

The increase in sauger harvest may be the result of this species increasing in numbers in order to fill the environmental space vacated by walleye.

2.5.4 PROBLEM: LACK OF PUBLIC AWARENESS

2.5.4 a) Description

Much of the general public is unfamiliar with the fundamental concepts of fisheries management.

ie) - the inadequacies of artificial fish stocking vs. self-sustaining populations, environmental requirements of fish species and the requirements of the Lakes and Rivers Improvement Act.

This results in unrealistic expectations about resource capability and angling success and also in the unconscious destruction of suitable fish habitat.

2.5.4 b) Description

The target testing exercise indicates that the public is not taking full advantage of angling opportunities available in Temagami District.

An enormous surplus of smallmouth bass, northern pike and lake whitefish exists across the district.

	Location
1	Zone #1 (L. Temagami): creel survey data identifies a large surplus of northern pike, smallmouth bass and lake whitefish
2	Zone #4 (Tri-Towns): a surplus of warmwater fish species exists
3	Zone #5 (Highway #805): a surplus of smallmouth bass and northern pike exists
4	Zone #6 (Lady Evelyn R./ Makobe Lake): a surplus of warmwater species exists
5	Zone #7 (Highway #11): a surplus of lake trout, and warmwater species exists
6	Zone #8 (Remainder of District): a surplus of all sportfish species exists

3.0 OPTIONAL MANAGEMENT STRATEGIES AND TACTICS

3.1 INTRODUCTION

A number of optional management strategies and tactics to address the problems and issues just mentioned were evaluated by District fisheries staff. Management strategies are planned actions or measures which will be followed to achieve the identified targets. Tactics are the specific methods which are employed to achieve the strategies. Some options were not considered feasible and will not be presented here.

Other options may be suggested by the public during this planning process. Public input is also being sought to help select the preferred management strategies and tactics which will be used in this Management Plan.

3.2 STRATEGIES AND TACTICS

This Fisheries Management Plan will provide a general management direction to be followed between now and the year 2000. Specific management actions for the first 3 years will also be identified.

Optional management strategies and tactics that are of general application across the District are outlined below. It should be pointed out that maintaining the status quo is also an optional fisheries management strategy.

PROBLEM 1 : LAKE ACCESS

Strategies	Tactics
Increase Access Where Lack of Access Is A Problem	- provide input to timber management plans, road or pipeline construction plans, etc. - identify areas requiring access through the District Roads Committee. - seek input from the public to identify lakes where additional access would be beneficial. - encourage the public, through co-operation with MNR, to build access trails to specified lakes. ie: CFIP groups could access brook trout lakes.

Strategies	Tactics
Control Access Where It Would Be Detrimental	- seek input from the public to identify lakes where increased access would be detrimental, ie: tourism lakes - identify areas where access should be controlled through input to the District Roads Committee and timber management plans (ie: A-1 lake trout lakes, outpost or tourism lakes). Consider total or seasonal road closures, or road removal after harvesting operations are completed depending upon local circumstances. (App. 1 & 3)

PROBLEM 2 : HABITAT LOSS OR DEGRADATION

Strategies	Tactics
Protect Fisheries Habitat	- provide input to both internal and external plans and proposals (eg. Environmental Assessments, severance proposals, shoreline development proposals, timber management plans, road proposals, municipal plans, etc. Site inspections when necessary). - enforce existing legislation to prevent habitat degradation (eg. Fisheries Act, Lakes and Rivers Improvement Act, etc.). - public education regarding the importance of fish habitat and the requirements of the Lakes and Rivers Improvement Act, ie. news releases, personal contact.

Strategies	Tactics
	- work with landowners and municipalities to minimize the impacts of shoreline modificaions, agricultural and drainage programmes.
	- use of shoreline reserves to protect lakes and critical habitats during timber operations, eg: lake trout lakes, creeks with walleye spawning areas.
Inventory and Assess Fisheries Habitat	- survey new waters or update old surveys as necessary, eg: brook trout lake candidates in Hwy. #11 corridor or around Lake Temagami.
	- monitor acidity levels in District lakes to determine deterioration or improvement in water quality.
	- support water quality, fish habitat and acidification studies being conducted by other agencies (eg. Ministry of the Environment, universities, etc.).
	- identify and assess key fish habitat, eg. spawning beds, nursery areas.
Improve Fisheries Habitat	- rehabilitate, improve or create spawning areas.
	- rehabilitate or improve stream and lake habitats, eg: Friday Lake log cribs for cover, beaver dam removal on brook trout streams.
	- encourage C.F.I.P. projects that improve fisheries habitat, eg: cleaning and creating spawning areas, stream rehabilitation.

Strategies	Tactics
	- support projects by other agencies that improve fisheries habitat, eg. spawning bed creation through road and pipeline stream crossings.
	- consider lake reclamations to increase the sport fish potential of particular lakes if feasible.

PROBLEM 3 : OVERHARVEST OF SPORTFISH

Strategies	Tactics
Encourage Utilization of Other Species	- increase public awareness of these species through news releases, brochures, media involvement ie: outdoor magazines.
	- introduce alternate species in key areas, eg: splake
Direct Angling Pressure Away from Overharvested Lakes	- improve access to nearby lakes.
	- stock suitable lakes with brook trout, rainbow trout or splake to attract anglers.
	- consider catch-release fishing and fly-fishing only, in selected areas.
	- reintroduce fish into any lakes that may have recovered from acid stress to a point where fish can again survive and grow (depends on results of acidity survey)
Enhance Existing Populations	- encourage C.F.I.P. stockings of walleye fingerlings or adult walleye transfers in selected lakes, eg: Herridge Lake, Olier Lake, Denedus Lake.

Strategies	Tactics
	- supplemental stocking where necessary.
Control Illegal Harvest	- direct enforcement to problem areas.
	- promote public awareness of fishing regulations through personal contact, news releases.
Limit Angler Success	- regulations regarding size limits, catch limits, gear, equipment and bait restrictions, and sanctuaries on fish concentration areas.
Limit Angling Pressure	- consider regulations regarding sanctuaries, seasons and equipment limitations.
	- access restrictions.
Improve Knowledge of Fisheries Resource	- monitor harvest and fish populations through creel surveys and population studies to determine exploitation levels.
	- conduct stocking assessments to enable the best use of stocked fish and determine if fish stocking is being effective.
Protect Spawning Populations	- maintain sanctuaries on the Montreal River, Net Lake, Herridge Lake and Creek. Consider additional sanctuaries on a case by case basis.

Strategies	Tactics
PROBLEM 4 : LACK OF PUBLIC AWARENESS	
Improve Public Education and Communication	- provide results of MNR projects through news releases, resources reports and direct contact of staff with public (ie. creel surveys, tagging studies, stocking assessments.)
	- make fisheries pamphlets and brochures available and visible at the District Office.
	- give presentations on fisheries management to interested groups.
	- use exhibits or interpretive programs at fairs and parks to supply information. Have pictures of District projects available to show local public.
	- use project W.I.L.D. in elementary schools to gradually develop public awareness on environmental issues.
	- work with local school boards to incorporate information specific to fisheries management in the school curriculum.
Increase Awareness of Existing Legislation	- use news releases, personal contacts, exhibits, pamplets at District office, to educate public on requirements of Lakes and Rivers Improvement Act, Fisheries Act, Game and Fish Act.

Strategies	Tactics
Promote Public Involvement in Fisheries Management	- encourage hands-on participation of public in fisheries management through C.F.I.P. - solicit public input in development of Fisheries Management Plan through open houses and meetings with interest groups. - encourage public input when resolving user conflicts or other problems.

3.2.1 ZONE DESCRIPTIONS

The Temagami District represents a diverse set of conditions. Lake size, accessibility, use, species distribution, lake types and problems vary depending upon the area under consideration. In order to better manage and understand the fisheries, waterbodies that had common or unique characteristics were grouped together. This resulted in eight zones being identified within Temagami District (Map 4).

The zone concept is only a management option designed to enable fisheries managers to address problems and concerns affecting specific lakes or groups of lakes. The zones were derived after careful consideration of the available data and using the knowledge of fish and wildlife staff. Further refinements may be necessary as more knowledge is gained through the public participation process.

Zone descriptions and details on optional strategies and tactics are outlined in the following section.

TEMAGAMI DISTRICT

LEGEND

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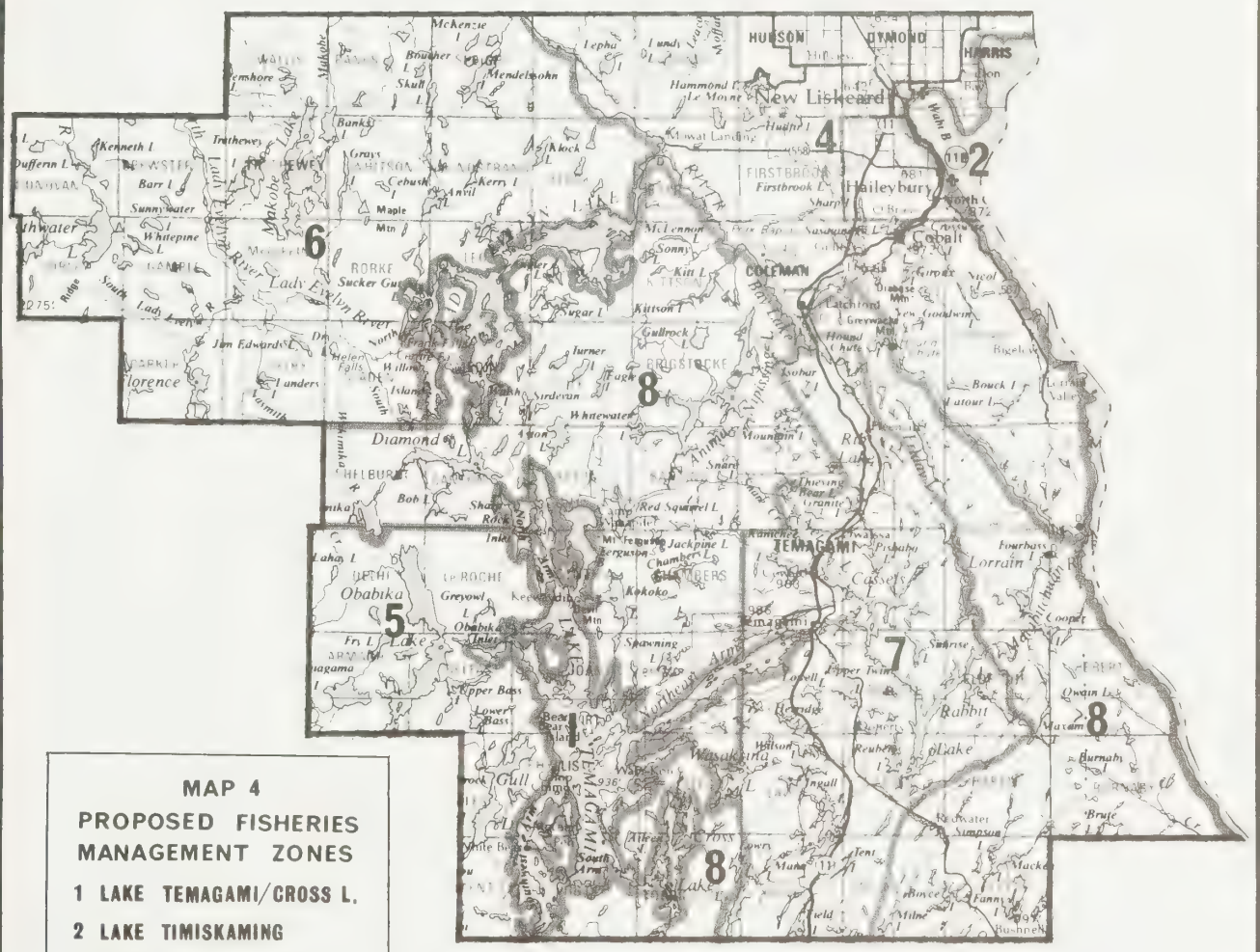


MAP 4

PROPOSED FISHERIES MANAGEMENT ZONES

1 LAKE TEMAGAMI/CROSS L.
2 LAKE TIMISKAMING
3 LADY EVELYN LAKE
4 TRI-TOWNS
5 HIGHWAY 805
6 LADY EVELYN R./MAKOBE L.
7 HIGHWAY 11 CORRIDOR
8 REMAINDER OF DISTRICT

3.2.2 Identification and Evaluation of Management Options by Zone

Zone 1: Lake Temagami/Cross Lake: Lake Temagami is the largest coldwater lake in the district (20,971.7 ha.), representing 40% of the district's coldwater habitat and providing 44% of the district's allowable yield of lake trout.

Temagami is the second most heavily fished lake in the district and the most heavily fished lake trout lake (23,000 angler days/yr). 81.7% of anglers are non-local Ontario residents many of whom are from Southern Ontario.

Cross Lake currently supports 1700 angler days/year of fishing pressure and a harvest of 400 kg. of lake trout. The allowable yield of lake trout is calculated at 700 kg/yr.

DLUG has designated these as A-2 lake trout lakes.

Because of the high quality of this fishery and its importance to the economy of the area, strategies will be proposed to preserve/enhance these values.

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Protect fish habitat	a) Provide input to Forest Management Plans and other internal and external plans to ensure appropriate prescriptions for shoreland areas are developed that protect/enhance fish habitat.		
	b) Continue to locate and document lake trout and walleye spawning sites.		
	c) Encourage the continued involvement of the local C.F.I.P. group to undertake spawning site improvement projects where required.		
	d) Continue to work co-operatively with the Ministry of the Environment to obtain up to date water quality data.		
ii) Protect and enhance fish populations	a) Continue to schedule regular creel surveys to collect updated angling harvest and pressure information.		a) A well established data base exists for monitoring trends in the Lake Temagami fishery. It is important to maintain consistency through regular creel surveys with established methods. Data on the winter and summer fisheries will continue to be collected every third year.

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
	b) Maintain a high quality naturally reproducing lake trout fishery at a standard of 0.5 kg/angler day.		b) Potential lake trout production in Lake Temagami is estimated at 9,500 kg/yr. At a quality standard of 0.5 kg/angler day, 19,000 angler days can be accommodated Present use is 15,600 angler days for lake trout.
	c) Maintain the current split open lake trout season of Feb. 15 to Mar. 15 and May third Saturday to Sept. 30.		c) The short winter season continues to protect immature lake trout formerly harvested when they were most susceptible in January. Average weights of lake trout in the winter harvest have increased since this implementation and more are surviving to spawn for the first time.
	d) Consider the implementation of fish sanctuaries where required on prime spawning area.		d) Some spawning populations may require additional protection when they are most easily over exploited. Such sanctuaries would likely be implemented only during closed seasons so there would be no impact on angling opportunities.
	e) Allow stocking of walleye fingerlings by the C.F.I.P. group to re-establish viable walleye fisheries in selected areas of Lake Temagami.		e) Stocking of walleye fry likely is of negligible benefit due to high mortality rates.
iii) Ensure current knowledge and the opportunity for involvement is available to all parties interested in the fishery.	a) Continue to provide current data summaries for public distribution.		
	b) Continue to attend interest group meetings and provide information to the media as required.		

Zone 1: Lake Temagami/Cross Lake, cont.....

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
	c) Consider the formation of Lake Temagami Fisheries Management Advisory Committee to include interest group representative.		
1/ Issue/Problem: Limited accessibility may deter some anglers from utilizing Lake Temagami			
i) Continue to allow access at Baie Jeanne, at the south end of the Southwest Arm of Lake Temagami.	a) Maintain access point in current condition.	i) The Baie Jeanne access point in its current condition, is recognized as providing limited access to the lake. It is actually physically located in Hobbs Township, North Bay District.	a) Small watercraft can be launched at this location. Larger, trailered vessels cannot be accommodated here.
	b) Improve access point.		b) Improved access may increase angling pressure on lake trout by an unknown amount. Would provide increased convenient coldwater angling opportunities to local anglers. This would constitute an amendment to the District Land Use Guidelines.
ii) Prohibit additional access to the lake.	a) Provide input to Forest Management Plans for areas surrounding the lakes with particular emphasis on prevention of road encroachment in shoreland areas.	ii) Consistent with Temagami District Land Use Guidelines intent for Lake Temagami.	a)b) Further access would encourage additional fishing pressure that may have negative impacts on the fisheries resource.
	b) Review other internal and external proposals which may have similar impacts on the area.		

Zone 1: Lake Temagami/Cross Lake cont.....

2/ Issue/Problem: Improved access has resulted in increased angling pressure on Cross Lake, a high quality lake trout fishery

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Monitor the effects of improved access.	a) Continue to incorporate Cross Lake in regularly scheduled creel survey programme.	i) Improved access occurs when new roads or trails are built for logging or other purposes. These may not lead directly to a fishery but may come within close proximity to it. This has potential to increase use.	a) Is included with regular survey of Lake Temagami.
ii) Mitigate potential impact from such access where possible.	a) Provide input to Forest Management Plans and other internal and external plans to ensure road locations comply with guidelines for important lake trout fisheries.		
	b) Continue to inspect roads for possible unauthorized access point infractions and remove when encountered.		b) Cross Lake is an A2 lake trout lake to which no new access has been authorized. Also would create new access to Lake Temagami which is contrary to D.L.U.G..

3/ Issue/Problem: The public is not taking full advantage of available angling opportunities for alternate species in Lake Temagami

i) Encourage interest in alternate species particularly northern pike, smallmouth bass, whitefish.	a) Prepare pamphlets for public distribution to advertise availability, likely locations, times etc. to more successfully harvest these species.	i) Large surpluses of these species currently are available for harvest. Increased interest in these species may divert additional pressure from lake trout.	a)b)c) Considerable local knowledge is already available on alternate species fisheries in Lake Temagami. Collating this into summaries should greatly benefit all parties by way of increasing tourism potential while still guarding the lake trout fishery.
	b) Meet with tourist outfitters and charter boat operators to tap their knowledge and expertise and foster their involvement in alternate species angling opportunities.		
	c) Arrange media coverage to feature these species perhaps with individuals as outlined in b) above.		

Zone 1: Lake Temagami/Cross Lake cont.....

4/ Issue/Problem: Lack of reliable pressure and harvest information on the walleye fishery

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Improve the methodology of assessing the walleye fishery.	a) Schedule regular creel survey patrols for late evenings to concentrate on walleye anglers. b) Initiate a volunteer creel program with cottagers on Lake Temagami to supplement information collected during the creel survey. c) Schedule regular tourist outfitter camp checks by creel survey crews to collect complete trip information from guests.	i) Fisheries managers believe current information underestimates harvest of walleye. Walleye surpluses may be much smaller than estimated. This information is important for providing future direction for walleye management on Lake Temagami.	a)b)c) All of these measures should greatly improve walleye angling information and also involve the current users in a very meaningful way. One drawback may be the concern of creel survey crews being required to travel the lake after dark.

Zone 2: Lake Timiskaming: Although jurisdiction over Lake Timiskaming is shared with the Province of Quebec, data has been collected and presented for the entire fishery.

Lake Timiskaming is the largest lake in the district (29,507.2 ha.), representing 60% of the total productive warmwater habitat. This zone also includesthe Blanche River.

Timiskaming is the only lake in the district in which sauger are found.

Pressure estimate for this zone is 52,184.0 angler days/yr. or 36.1% of the total district angling pressure. 72.6% of the pressure is by local anglers. Current walleye harvest is exceeding the estimated allowable yield.

Any new management initiatives for this zone arising from the Fisheries Management Planning process cannot be undertaken without the involvement of the appropriate Quebec authorities.

General strategy will be to maintain a healthy walleye and sauger fishery.

Zone 2: Lake Timiskaming, cont.....

1 Issue/Problem: Current annual harvest of walleye is exceeding the estimated allowable yield

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Allign harvest of walleye with allowable yield by reducing harvest of all fishermen.	a) Reduce length of open season in the spring by one week from a second Saturday in May opening to a third Saturday in May opening.	i) Reduction of the current harvest of walleye will largely eliminate the current harvest/yield imbalance.	a) This tactic is expected to lower the harvest of walleye during periods when they are the most vulnerable and the biological impact on walleye populations is the most significant. In the spring, many mature walleye are being harvested before they have spawned. Angling quality is also expected to increase by spreading out the angler concentrations which now occur in response to the second Saturday opening on Lake Timiskaming followed by the third Saturday opening on the Blanche River.
ii) Control illegal fishing (over limits, pre-season harvest etc.)	a) Continue to enforce all regulations. b) Schedule more frequent enforcement patrols. c) Educate public and encourage them to report illegal activity.	ii) Reduction of illegal harvest of all species will occur	a)b)c) Impacts on legal anglers will be minimal and should be welcomed by most.

Zone 2: Lake Timiskaming, cont.....

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
iii)Ensure water level fluctuations have minimal impact on walleye spawning success.	Work closely with Canada Public Works to ensure normal water level is attained by May 1.	Walleye access to prime shore spawning site is dependent on the lake being near its summer normal water level. Recruitment failure could occur in years when low water levels force use of poorer sites.	Lake Timiskaming water levels are controlled by a dam at the south end of the lake. Operation is under the jurisdiction of the Government of Canada.
2/ Issue/Problem: Changes are occurring in the walleye/sauger harvest structure on Lake Timiskaming			
i) Encourage increased interest in sauger angling opportunities.	Educate anglers through routine field staff checks to distinguish between walleye and sauger appearance, habits, habitat preference etc..	No difference in palatability is apparent between sauger and walleye. Anglers prefer to harvest walleye because of its greater average size.	Changes in relative abundances of walleye and sauger appear to be occurring if increases of sauger and decreases of walleye in anglers creels are a true reflection of the current fish population status. Increased harvest of sauger may reverse this trend and be acceptable to anglers. Undue impact on sauger populations is not expected.
ii) Maintain up to date data base.	Schedule regular creel survey of Lake Timiskaming and Blanche River.	In order to determine trends in the fishing it is important to have current data available for making fisheries management decisions. This must be collected in a consistent fashion to be useful.	Schedule intensive creel surveys of both winter and summer fisheries every three years, using established methodology to maintain consistency. This will be particularly important for determining effectiveness if proposed changes are adopted.

Zone 3: Lady Evelyn Lake System: This zone is made up of Lady Evelyn, Sucker Gut and Willow Island Lakes (7,718.9 ha.). All three lakes are high quality warm water fisheries.

These lakes are heavily fished by non-residents who represent 77.6% of the estimated fishing pressure.

Because of the importance of this system to tourism, the general strategy will be to recognize this value through maintaining the remoteness and enhancing the walleye fishery.

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Prevent direct road access to the system.	a) Provide input to internal and external development plans particularly those of Forest Management, as to proposed access in the area.	i) Consistent with District Land Use Guidelines. This area is recognized for its importance to area tourism which may be diminished by direct road access.	a)b) Proposed road locations and forest operations can be designed to minimize impact on this area.
	b) Provide input to Forest Management Plans through the Areas of Concern exercise to protect the remote nature of the area for tourism benefits.		
ii) Ensure current knowledge and the opportunity for involvement is available to all parties interested in the fishery.	a) Consider the formation of a Lady Evelyn Lake System Fisheries Management Advisory Committee to include tourist outfitter and other interest group representation.		
iii) Create a trophy fishery for walleye.	a) Introduce "slot-sizing" to prohibit the harvesting of walleye between certain lengths.	iii) Because almost 80% of anglers are non-residents, trophy fishing legislation should be an added promotional feature for tourist establishments. Angling opportunities will not diminish. Biological strength of current walleye stocks make this strategy a viable option.	a)b)c) The effectiveness of these tactics is dependent on sizes selected, amounts by which limits can be reduced. This presents an excellent opportunity for meaningful involvement of interest groups such as ii) above.
	b) Introduce maximum length restrictions to limit harvest of walleye above certain total lengths.		
	c) Reduce creel limits.		

IDENTIFICATION		EVALUATION	
Optiona Optional Strategies	Optional Tactics	Strategies	Tactics
iv) Maintain up to date data base.	a) Schedule regular creel survey of the Lady Evelyn Lake system.	iv) In order to determine trends in the fishery it is important to have current data available for making fisheries management decisions.	a) Schedule an intensive data creel survey of the open water fishery every three years, using established methodology to maintain consistency. This will be particularly important for determining effectiveness if proposed changes are adopted.
1 Issue/Problem: Water level fluctuations caused by dams may result in loss of potential spawning substrate and/or influence spawning success.			
i) Ensure adequate water levels are maintained during critical periods in the sportfish life cycle.	a) Continue to work closely with Ontario Hydro to ensure that traditional walleye spawning areas are covered with an adequate depth of water during the period April 15 - June 15 each year. b) Continue to request water level information from Ontario Hydro and review it annually to determine whether any potential problems may have occurred.	i) Information from a walleye tagging study in 1980 indicated good age group strength and diversity existed. Walleye appear to spawn in historic areas that have sufficient water levels and flows at all times. Spawning areas for smallmouth bass are not affected because normal summer levels have been obtained before they spawn. Northern pike spawning areas may be limited because winter drawdown kills aquatic vegetation in shallow areas. Despite this, a calculated surplus of northern pike exists.	a)b) Ontario Hydro has been very co-operative in supplying water level information and reacting to any recommendations on restrictions during spring operating periods.

Zone 4: Tri-Towns: The Tri-Towns zone bordered by the Montreal River is the most heavily populated area in the district.

This zone is characterized by small, shallow warmwater lakes. A lack of coldwater fishing opportunities will be addressed in the management plan.

55.6% of the fishing pressure in this area is by local anglers.

1/ Issue/Problem: Demand exceeds supply of coldwater species

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Augment current stocking programme.	a) Introduce splake into Cassidy (Bass) and Gillies Lakes.	i) Supplies of most coldwater species are currently available from Provincial hatcheries. Rainbow trout are currently in limited supply but more will be available in the future.	a) Cassidy & Gillies Lakes are accessible to the public, are in close proximity to population centres and appear suitable for splake introductions. Previous attempts to create lake trout fisheries in these lakes have failed and they are not suited for brook trout.
	b) Explore the possibility of introducing an alternate species (eg: rainbow trout) into lakes such as Belle Isle in which brook trout have not done well.		b) Rainbow trout may do well in the presence of yellow perch competition in Belle Isle Lake because of their more rapid growth rates compared to brook trout. Possibility of escapement to native brook trout habitat is non-existent.
	c) Assess lakes in the area for their potential to support coldwater fish species by conducting selected lake surveys.		c) Scheduling of surveys on selected lakes is feasible with existing staff.
	d) Encourage input from area anglers to recommend historic or potential fisheries for investigation.		d) District fisheries staff can arrange to present information on habitat requirements for coldwater species at Game & Fish club meetings. Feedback should be generated once anglers become aware of what we are looking for.

Zone 4: Tri-Towns, cont.....

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
ii) Explore means of utilizing the lake trout angling potential of Sassaginaga Lake.	a) Meet with municipal representatives from the Town of Cobalt to determine whether the creation of a controlled fishery is feasible.	ii) Sassaginaga Lake is the main municipal water supply for the Town of Cobalt. Legislation designed to protect this water supply prohibits any other use of the lake including angling in any form.	a) Some possibilities for a controlled fishery might include short-term municipal angling tags in limited quantities; access only by foot or canoe; restrictions on use of bait, building fires, a can/bottle ban etc.. There would be potential for increased revenue to the town from licence sales. Inclusion of this option with other on-going activities to enhance tourism could be of benefit.
iii) Explore other means of creating coldwater fishing opportunities.	a) Encourage the development of Private Fishing Areas in suitable locations by considering all alternatives when reviewing applications for farm ponds etc.		a) Since considerable private lands exist in the Tri-Towns area, potential exists for such initiatives where they do not conflict with existing fish populations.
2/ Issue/Problem: Blockages of brook trout streams may be limiting fish access to prime sections of habitat			
i) Remove obstructions.	a) Encourage local Game & Fish clubs to take on these habitat improvement projects.	i) Streams identified as having obstructions include Darwin and Hudfir creeks. Windfalls, debris jams and beaver dams are examples of the types of obstacles known to exist.	a) Such projects would provide ideal opportunities for local anglers to become involved in meaningful ways.
	b) Direct local trappers to selected areas where control of beaver populations are desired.		b) In some areas beaver dams create brook trout habitat. Too many dams, however, will cause the water to warm up and make it more suitable for competitors such as creek chubs. Selective control under the direction of fisheries managers would be appropriate.

Zone 4: Tri-Towns, cont.....

3/ Issue/Problem: Water level fluctuations on the Lower Montreal River may be affecting northern pike spawning success

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Ensure adequate water levels are maintained to cover spawning areas during critical periods.	a) Work closely with Ontario Hydro to ensure water levels are stable or rising during the period March 15-May 15.		a)b) Ontario Hydro is very co-operative in working within guideliens established by fisheries managers.
	b) Obtain water level records from Ontario Hydro on an annual basis for the Lower Notch impoundment.		

Zone 5: Obabika/Highway #805: This zone is centered around four A1, one A2, two B1, and one B2 lake trout fisheries. The general strategy will be to improve their quality.

The area is separated from the rest of the district by Lake Temagami and is road accessible only via Highway #805 through North Bay District.

Users are predominately locals and residents from the North Bay, Sudbury and Sturgeon Falls area.

In conjuntion with North Bay District, public meetings were held during the past year to discuss fisheries management in this area. As a result, the decision was made to implement January closures on Clearwater, Gull and Lower Bass Lakes to protect lake trout stocks. Season closures as a management strategy will not be addressed further for the zone.

Public input has already lead to this selection as a preferred strategy.

1/ Issue/Problem: Limited accessibility may deter some anglers from utilizing Gull Lake

Optional Strategies	Optional Tactics	Strategies	Tactics
i) Allow continued traditional use.	a) Allow continued use by the public. Road and access point will not be maintained on a regular basis.	i) Consistent with District Land Use Guidelines.	a) Current level of harvest is near the potential yield for both walleye and lake trout. Virtually the entire harvest occurs during the open water season and is generated by anglers using the road access. Improved access would result in increased harvest to the detriment of the fishery.

Zone 5: Obabika/Highway #805, cont.....

2/ Issue/Problem: Improved road access has increased fishing pressure on Obabika Lake

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Allow existing road access. Once updated information on the fishery is available, long term access strategies can be better addressed.	a) Monitor the fishery on Obabika Lake to determine current utilization.	i) Obabika Lake is classified as an A2 lake trout lake in the D.L.U.G.. Access and development having minimal fisheries impact is allowed for A2 lakes. Existing access through Crown Land will not be maintained on a regular basis. Access also exists through private land.	a) Available information suggests Obabika Lake is under utilized and quality angling opportunities are available for lake trout. Obabika Lake will be incorporated in planned angler surveys to update data base.

3/ Issue/Problem: Lake trout are being over harvested in Clearwater and Lower Bass Lakes and harvests are approaching the allowable yield in other lakes within this zone.

i) Monitor the fisheries to update existing data base.	a) Establish regular aerial angler counts to collect current open water angling pressure data.	i) Best available data is now somewhat dated. Fisheries management decisions require more current information on the fisheries within this area.	a) Aerial angler pressure counts can be scheduled for this area in conjunction with future surveys of Lake Temagami every third summer.
	b) Undertake a check station type creel survey to collect current information on the winter fisheries.		b) A check station creel survey is scheduled for the winter of 1988.
	c) Consider implementing a summer creel survey to collect harvest and biological data.		c) Results from a) above will be used to determine the most feasible methods of collecting this data.

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
ii) Restrict angling opportunities in Clearwater and Lower Bass Lakes.	a) Maintain gated road closure at Wawiagama Lake until forest management activities are completed and then remove road.	ii) A determination of whether this strategy is necessary will be made once better data as in i) above is collected.	a)b)c) The majority of angling pressure occurs on these lakes during the open water season. (Clearwater 54.7% Lower Bass 85.1%). January closures alone may be insufficient to produce rapid improvements to angling quality.
	b) Remove road access to Lower Bass Lake.		
	c) Consider the banning of motor boats on both lakes.		
iii) Encourage interest in existing alternate cold water fishing opportunities and the development of new opportunities.	a) Improve access trails to area brook trout fisheries by brushing and marking eg: Redbark, Herbert, Price.	iii) A good opportunity exists for the involvement of area tourist outfitters. Game & Fish clubs and unaffiliated users through C.F.I.P..	a)b) Projects of this nature are well within the intent of C.F.I.P. and could be accomplished through the existing group administrated from North Bay District.
	b) Assess lakes identified as having good potential for the creation of brook trout fisheries.		b) Temagami District detailed background information lists several unsurveyed lakes that may have this capability.

Zone 6: Lady Evelyn River/Makobe Lake: This zone is characterized by a predominance of coldwater fisheries.

There are 25 lake trout and 15 brook trout lakes, as well as the Lady Evelyn River system (a high quality brook trout fishery) and the aurora trout watershed. Lady Evelyn-Smoothwater Wilderness Park is contained within this zone.

There are 89 lakes in this zone that have been identified as suffering from acid stress.

The general strategy for this zone will be to maintain the current quality native brook trout fishery and to improve lake trout fishing opportunities.

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Within the boundary area of Lady Evelyn-Smoothwater Park fisheries management will be carried out in a manner that meets the objectives of a wilderness class provincial park. Fisheries objectives will be incorporated in the proposed park management plan.	a) Insure input to the proposed Lady Evelyn-Smoothwater Wilderness Park plan adequately addresses types of access, modes of travel, habitat protection and other concerns. b) Work closely with Parks personnel during plan preparation.	i) The Lady Evelyn River system currently provides quality remote angling opportunities along most sections. Modes of access and travel must be compatible with the objectives of a wilderness class provincial park.	a)b) The Park Management Plan will include an in-depth evaluation of access and other important management issues. Forest Management activities are prohibited within park boundaries.
1/ Issue/Problem: Lakes producing below biological potential due to acid stress			
i) Re-establish coldwater fisheries where feasible.	a) Continue to work co-operatively with the Ministry of Environment to obtain up to date water quality data. b) Take advantage of new information as it becomes available on fish in acid stressed environments to assess potential for rehabilitating fisheries. c) Consider re-introducing formerly occuring species in waterbodies where water quality has improved to the extent that successes are likely.	i) A large number of small lakes and some larger lakes in this area are known to be devoid of fish life at present. Some historically supported cold water species such as lake trout. This species has recently been successfully introduced in some Sudbury area lakes where water quality has improved. Sulphur dioxide emission reductions and greater dispersal from point sources in Sudbury should result in improved conditions in Zone 6 lakes. Successful re-establishment of lake trout should shortly be feasible in some lakes.	a)b)c) Lakes such as Florence, Landers and Jim Edwards would be given priority consideration for future lake trout re-introductions. A review of Lakes currently monitored by M.O.E. should establish current water quality status . Use of Sudbury MNR data will enable a determination of whether water quality is sufficiently improved in these lakes to consider lake trout stocking experiments.

Zone 6: Lady Evelyn River/Makobe Lake, cont.....

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactic
	d) If self-sustaining populations of aurora trout ever become established in their original watershed, consider creation of a unique strictly controlled trophy fishery.		d) A controlled trophy fishery would certainly attract attention and stimulate tourism related business. Species tag requirements, catch-release fishing, very small catch limits would all require considerate to protect this unique resource.
ii) Monitor pressure/harvest on stressed lakes which are still producing fish	a) Schedule more frequent checks of anglers to collect harvest and success rate data and biological data on angled fish.	ii) In order to insure that fish production in stressed lakes keep pace with improving water quality, it is important that adequate stocks remain within these lakes. If it becomes evident that angling harvest may delay or prevent this, short term restrictions may be necessary. eg: season closures, limit reductions, fish sanctuaries on selected lakes.	a) Increasing routine angler checks will provide very basic information on these fisheries. Sampling intensity may not be sufficient to provide meaningful data.
	b) Consider updating aerial pressure count information on both summer and winter fisheries.		b) Aerial survey techniques will provide good updated information on angling pressure changes but no harvest statistics.
	c) Consider establishing a check station type creel survey on the Beauty Lake Road.		c) A check station type creel in conjuction with b) will provide the best information on the main stressed lake trout fisheries in this zone. Funding and/or logistical considerations may prevent carrying out of b) & c).

Zone 7: Highway #11 Corridor: This zone consists of easily accessible, heavily fished lakes within a ten km. perimeter of highway #11.

Many of the district tourist establishments are located in this zone. 87.5% of the angling pressure is by non-local anglers.

Lack of easily accessible brook trout angling opportunities and means to enhance the fisheries for tourism values will be addressed in the management plan.

1/ Issue/Problem: Demand for easily accessible brook trout fisheries exceeds supply

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Create new coldwater fisheries.	a) Survey good potential brook trout lakes along Highway #11 to determine their potential for stocking.	i) Good potential exists for the creation of additional coldwater fishing opportunities in this zone.	a)b)c) These tactics are all feasible from the biological standpoint. No perceived negative impacts are evident at the present time. Detailed evaluation of proposals to introduce new species are required under the Environmental Assessment Act. Improvement to these fisheries will enhance their tourism value.
	b) Introduce rainbow trout in Robin Lake.		
	c) Assess the potential of creating coldwater fisheries in other lakes such as Christie, and Straight Lakes and Jumping Cariboo Creek.		
ii) Enhance existing cold water fishing opportunities.	a) Assess Pig, Strathcona #25 and Best #89 to determine whether live baitfish restrictions are still appropriate.		a) Live baitfish restrictions on these waters were originally created to reduce possible accidental introductions of unwanted competitors such as perch. These restrictions may also have reduced interest in these fisheries. Assessments to determine whether unwanted species are now present would involve fairly simple procedures. Depending on results, greater utilization of these fisheries could occur if these restrictions were removed.
	a) Post signs at stocked lakes along the Highway #11 corridor to make them more easily identifiable to anglers.		a) Preparation and posting of signs could be carried out by a local C.F.I.P. group.

Zone 7: Highway #11 Corridor, cont.....

2/ Issue/Problem: Angling quality is decreasing in several walleye fisheries

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
Monitor the fisheries to collect up to date information	a) Encourage the involvement of tourist outfitters known to utilize the fisheries to collect creel survey information from their guests.	i) Lakes believed to have suffered declines in angling quality for walleye include Wasaksina, Herridge, Field and a series of small unnamed lakes in Milne Township. No accurate documentation exists to acertain whether this is the case.	
	b) Forward volunteer creel survey packages to other known users of the fisheries such as cottagers, Land Use Permit holders and local residents.		
	c) Conduct an aerial open water angler survey on Wasaksina Lake.		c) Can be incorporated with a similar survey of Lake Temagami.
	d) Carry out a detailed population study and habitat evaluation in selected lakes in Milne Township.		d) Scheduled for 1987.
	e) Take advantage of existing data on population structures to determine their current status. (eg: electro-fishing studies being carried out by North Bay District).		e) The most current data is not yet available from North Bay District. This will be evaluated when it is received.

Zone 7: Highway #11 Corridor, cont.....

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
ii) Enhance selected walleye fisheries.	a) Continue to support the production and stocking of walleye fingerlings by area C.F.I.P. groups in lakes such as Herridge, Brophy, Jumping Cariboo, Olier, Field.		a) Some of the stocking in these lakes is also being carried out by North Bay District as part of an on-going walleye stocking assessment project.
	b) Encourage their involvement in habitat assessment and improvement projects. (eg: Herridge Creek, Herridge Lake).		b) More information is required on shore/shoal spawning walleye in Herridge Lake.
	c) Consider the creation of rotating closures ("pulse fishing") on the Milne Township lakes on an experimental basis.		c) Depending on results of i)d) further action such as live adult transfers may also be required to rehabilitate the fisheries and enhance their tourism value.
	d) Attempt to augment the spawning walleye population at Herridge Creek by eyed egg plantings.		d) Eyed eggs may be obtained through a local C.F.I.P. group.
	e) Maintain current sanctuaries on Herridge Creek and Herridge Lake.		e) Protection is required for spawning and post-spawning concentrations of walleye.

Zone 7 : Highway #11 Corridor, cont....

3/ Issue/Problem : Supplies of lake trout exceed projected demand

IDENTIFICATION			EVALUATION		
	Optional Strategies	Optional Tactics		Strategies	Tactics
i)	Provide information on available lake trout angling opportunities.	a) Make the public aware of locations of surpluses with brochures produced to supplement existing fishery map. b) Provide similar information to tourist outfitters for the use of their guests.			
ii)	Improve access to selected lake trout fisheries	a) Allow improvements to existing access road to the "Sand Dam" at Rabbit Lake (A2) b) Allow improvements to existing trails to Reuben Lake (B2) c) Review feasibility of access to other fisheries on a case to case basis.	ii)	Must be consistent with D.L.U.G. regarding lake trout fisheries.	a)b) Access Improvements to A2 and B2 lake trout lakes are consistent with D.L.U.G. Possible means of improving access include involvement of C.F.I.P. groups, co-ordination with Forest Management Plans or use of Junior Ranger manpower. MNR funding is limited for access improvements.

4/ Issue/Problem : Water level fluctuations may be affecting spawning success in Rabbit, Cassels and Snake Island Lakes

i)	Ensure adequate water levels are maintained during critical periods in the sportfish life cycle	a) Continue to work closely with Ontario Hydro to ensure that spring water levels are adequate to cover traditional walleye and northern pike spawning areas and lake trout spawning sites are covered in late fall. Ensure winter drawdowns do not occur before lake trout eggs have hatched in February.	i)	Water levels appear to be having minimal effects on walleye spawning success based on frequent checks by F & W staff each spring. Recruitment for lake trout appears to be good in both Cassels and Rabbit Lakes although knowledge on spawning sites is limited. Winter drawdown effects on lake trout fry are generally poorly understood. Little is known about northern pike spawning areas.	a) Ontario Hydro has been very co-operative in supplying water level information and in complying with operating restrictions during critical periods of the year. Water levels for all three lakes are controlled by the dam located at the Rabbit Lake outlet into the Matabitchuan River.

Zone 8: The Remainder of the District: This zone consists of a mixture of warm water and coldwater lakes, which could not be placed within the criteria used to designate the previous seven zones. It includes the south-east corner of the district, a central area between Lake Temagami and highway #11, and a small area north-west of Lake Temagami.

Current supplies of all sportfish species exceed projected demand.

1/ Issue/Problem: Improved access has resulted in increased angling pressure on high quality lake trout fisheries

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Monitor the effects of improved access.	a) Continue to incorporate lakes in regularly scheduled creel surveys when possible. b) Increase routine angler checks to other areas (eg: Turner Lake).	i) Improved access occurs when new roads or trails are built for logging or other purposes. These may not lead directly to a fishery but may come within close proximity to it. This has potential to increase use.	b) Public vehicular access to Turner and surrounding lakes is prevented by road closure at Whitefish Bay on the Red Squirrel Road. Snowmobile access is not restricted and logging roads in the area provide excellent snowmobile routes.
ii) Mitigate potential impacts from access to such fisheries where possible.	a) Provide input to Forest Management Plans to ensure road locations comply with guidelines for important lake trout fisheries. b) Continue to inspect roads for possible unauthorized access point infractions and remove when encountered.	ii) District Land Use Guidelines prohibit additional access to A1 or B1 lake trout lakes and additional authorized access to A2 lakes must have minimal fisheries impact.	

Zone 8 : The Remainder of the District, cont.....

2/ Habital loss or degradation is affecting fisheries

IDENTIFICATION		EVALUATION	
Optional Strategies	Optional Tactics	Strategies	Tactics
i) Monitor lakes which are extremely sensitive to acidification	a) Continue to co-operate with the Ministry of the Environment to collect current water quality data.		
	b) Conduct spawning assessments where required to determine whether recruitment failure is occurring (eg. Aston Lake).		b) Recruitment failure in Aston and other area lakes may be occurring. Anglers report catching large fish but no small ones. Further investigation is necessary to provide confirmation before recommendations for remedial action can be made.
ii) Ensure water level fluctuations caused by dams have minimal impact on spawning success.	a) Continue to work closely with Ontario Hydro to ensure adequate protection of lake trout spawning sites. (eg. Fourbass Lake)		a) Lake trout in Fourbass Lake are believed to spawn over deep sites that may not be effected by water level fluctuations. Other factors such as size of available habitat may limit their abundance.
iii) Ensure stream brook trout populations have adequate access to suitable habitat	a) Remove windfall, debris and beaver dam obstructions where necessary (eg. Friday Creek)	ii) Lack of access to suitable habitat may limit brook trout abundance or restrict growth rates.	a)b)c) Habitat improvements must be carried out under the direction fo fisheries managers. In some cases flooding caused by obstructions actually creates habitat.
	b) Involve C.F.I.P. groups or Game and Fish Clubs in such projects where possible.		
	c) Direct trappers to control beaver in selected areas.		

Zone 8 : The Remainder of the District, cont.....

3/ Issue/Problem : Angling returns in certain area lakes have diminished

IDENTIFICATION			EVALUATION		
	Optional Strategies	Optional Tactics		Strategies	Tactics
i)	Monitor fisheries to collect up to date information	a) Consider repeating an aerial angler survey of District Lakes b) Consider involving anglers known to use these lakes in a volunteer creel programme to collect harvest and biological data. c) Investigate other means of collecting harvest and biological data eg. C.F.I.P. groups, Tourist Outfitters, increased field staff checks where possible.	i)	Field staff observations indicate lakes such as Red Squirrel, Chambers Ross, Burwash and Maxam have suffered declines in angling quality. Confirmation with scientific data is required before further action can be recommended.	a)b)c) Small, widely scattered lakes with relatively light angling pressure are very difficult to survey with on the ground techniques which will give useful pressure information. Aerial pressure counts provide good trend data but are costly. Funding will initially be directed to other higher priority areas but may be available for surveys of this nature later in the period covered by the Fisheries Management Plan.

4.0 PUBLIC REVIEW

This summary report has been prepared to provide the public with information about the District's fisheries resource and optional management strategies and tactics. It is very important that we receive input from the public so that we can identify errors or omissions in the background data and select the preferred management strategies. We invite you to submit any comments about this document either at the Open Houses, or, if you prefer, you can complete the enclosed questionnaire and return it to the District Manager, Ministry of Natural Resources, P.O. Box 38, Temagami, Ontario, P0H 2H0 We will require the comments by February 13, 1987. All comments received by that date will be reviewed and considered when the draft Fisheries Management Plan is prepared. Public review will again be sought during the summer of 1987, when the draft Plan has been prepared.

Appendix 1 Lake Trout Lakes : Classification (DLUG) and Most Recent Stocking

A1: 100% Crown ownership of shoreline, excellent populations of naturally reproducing lake trout, managed exclusively for lake trout, no additional access permitted.

Lake	Twp.	Most Recent Stocking
Barter	Cole	-
*Banks	Trethewey	-
Beland	Hebert	-
Bergeron	Van Nostrand	-
Blackduck	Best	-
Chambers #37	Chambers	-
Clearwater	Armagh	-
*Diamond	Canton	-
Gamble	Gamble	-
Gorrie	South Lorrain	-
Greenwater	Van Nostrand	-
Gull	Scholes	1985+
Kokoko	Cynthia	1980+
Lower Bass	Belfast	-
*Makobe	Trethewey	-
McCulloch	Corley	-
McGiffin #13	McGiffin	-
McKenzie	Speight	-
Mountain	Best	-
Munroe	Speight	-
*Niccolite	Van Nostrand	-
Philbrick	Speight	-
Red Squirrel	Aston	1986+
Skull	Banks	-
Skunk	Scholes	-
*Smith	Corley	-
*Smoothwater	Corley	-
Sunrise	Riddell	-
Trethewey	Trethewey	-
Turner	Cole	-
Whitewater	Brigstocke	-

* producing below full biological potential
+ stocking discontinued

A2: Some private shoreline property, excellent populations of naturally reproducing lake trout, development to be examined on case to case basis.

Lake	Twp.	Most Recent Stocking
Anima-Nipissing	Brigstocke	1981
Best	Brigstocke	1985
Cassels	Cassels	1986
Cooper	Eldridge	1985
Cross	Torrington	1977
Kitt	Kittson	1986
Mendelssohn	Speight	-
Obabika	Delhi	1979
Rabbit	Askin	-
Rib	Gillies	1983
Temagami	Strathy	1976
Upper Twin	Riddell	-

B1: 100% Crown ownership of shoreline, fair naturally reproducing or excellent stocked lake trout population managed exclusively for lake trout, no additional access permitted.

Lake	Twp.	Most Recent Stocking
Aaron	South Lorrain	-
Allan	Belfast	-
Anvil	Whitson	-
Barmac	Aston	-
*Big Chief	Klock	1986
Brigstocke #69	Brigstocke	-
Diabase	Brigstocke	-
Hearst	Gillies Limit	1986
Kittson #7	Kittson	-
*Lady Sidney	Leo	1986
*Lulu	Corley	-
*Marina	Corley	-
McLean	Banting	-
McNab	Best	1986
Norris	Olive	1983
Roosevelt	Gillies Limit	1985
Sugar	Dane	1984

* producing below full biological potential

Lake	Twp.	Most Recent Stocking
Thieving Bear	Best	-
Trethewey	Trethewey	-
Upper Bass	Belfast	-
Wasaksina	Law	-
Whitney	Gillies Limit	1984

B2: Some privately owned shoreline, fair naturally reproducing or excellent stocked lake trout populations, development to be examined on case to case basis.

Lake	Twp.	Most Recent Stocking
Bouck	Lorrain	-
Chambers	Chambers	-
Fourbass	South Lorrain	-
Jackpine	Chambers	-
Jumping Cariboo	Law	-
Hangstone	Torrington	-
Kanichee	Strathy	1981
Kittson	Kittson	-
Lepha	Auld	-
Lowell	Strathcona	1985
Net	Strathy	1981
Reuben	Askin	1985
Sasaginaga	Coleman	1981
Tooth	South Lorrain	1986
Wawiagama	Armagh	-

C : Non designated, poor lake trout populations

Lake	Twp.	Most Recent Stocking
Cassidy	Coleman	1984
Cummings	Scholes	1985
Elissa	Gamble	-
*Justin	Coleman	1986
Lady Dufferin	Donovan	-
McLaren	Briggs	-
Pats	Vogt	-
Secret	Joan	-
South Iron	Vogt	-
Spawning	Briggs	-

* producing below full biological potential

Unclassified Lake Trout Lakes (recently discovered)

Lake	Twp.
Aileen	Vogt
Boulton	Riddell
Shelburne #39	Shelburne

Appendix 2 Temagami District Stocked Lakes (1986)
(Other Than Lake Trout)

BROOK TROUT (since 1980)

Lake	Twp.	Most Recent Stocking
Banting #55	Banting	1983*
Barnet	Aston	1986
Bartle	Hudson	1985
Belle Isle	Barr	1982*
Best #73	Best	1986
Best #89	Best	1986
Birch	Joan	1983*
Breeches	Best	1986*
Browns	Cynthia	1986
Cariboo	Strathcona	1984*
Copper Sand	Cynthia	1986
Dane #11	Dane	1986
Dane #18	Dane	1984*
Darwin Creek	Gillies Limit	1985
Four Mile Pond	Gillies Limit	1984*
Gillies Limit #19	Gillies Limit	1986
Gillies Limit #59	Gillies Limit	1986
Hebert	Joan	1986
Hillcrest	Joan	1986
Hook	Strathy	1986
Hush Hush	Cynthia	1986
Latour Creek	Lorrain	1986
Liberty	Aston	1985
Loon	South Lorrain	1984*
Malloch	Cynthia	1986
Mowat	Barr	1986
Pig	Law	1986
Pike Creek	Firstbrook	1986
Price	Phyllis	1986
Redbark	Belfast	1986
Robert	Brigstocke	1986
Robin	Olive	1983*
Eagle (Roko)	Cynthia	1986
Secret	Joan	1986
Siderock	Cynthia	1986
Slade	Leo	1980
South Lorrain	South Lorrain	1986
Strathcona #25	Strathcona	1986
Wabi Creek	Bucke	1986
Wilson	Gillies Limit	1986

* stocking discontinued

RAINBOW TROUT (since 1979)

Lake	Twp.	Most Recent Stocking
Anima-Nipissing R.	Banting	1982
Bouck	Lorrain	1979
Caswell	Lorrain	1985
Dean	Phyllis	1983
Latour	Lorrain	1984
Pleasant	Strathcona	1985
Stars	Sladen	1981*
Walter	Brigstocke	1983

* stocking discontinued

SPLAKE

Lake	Twp.	Most Recent Stocking
Hammond	Hudson	1985*
Isobar	Gillies Limit	1986
Prud'Homme	Gillies Limit	1986
Whitney	Gillies Limit	1986

AURORA TROUT

Lake	Twp.	Most Recent Stocking
Whitepine	Gamble	1970
Whirligig	Gamble	1984

WALLEYE (CFIP)

Lake	Twp.	Most Recent Stocking
Red Squirrel	Aston	1986
Temagami	Strathy	1986
Field	Olive	1986
Jumping Cariboo	Law	1985
Herridge	Strathcona	1986
Brophy	Law	1986

SMALLMOUTH BASS

Lake	Twp.	Most Recent Stocking
Friday Lake	Best	1979

Appendix 3

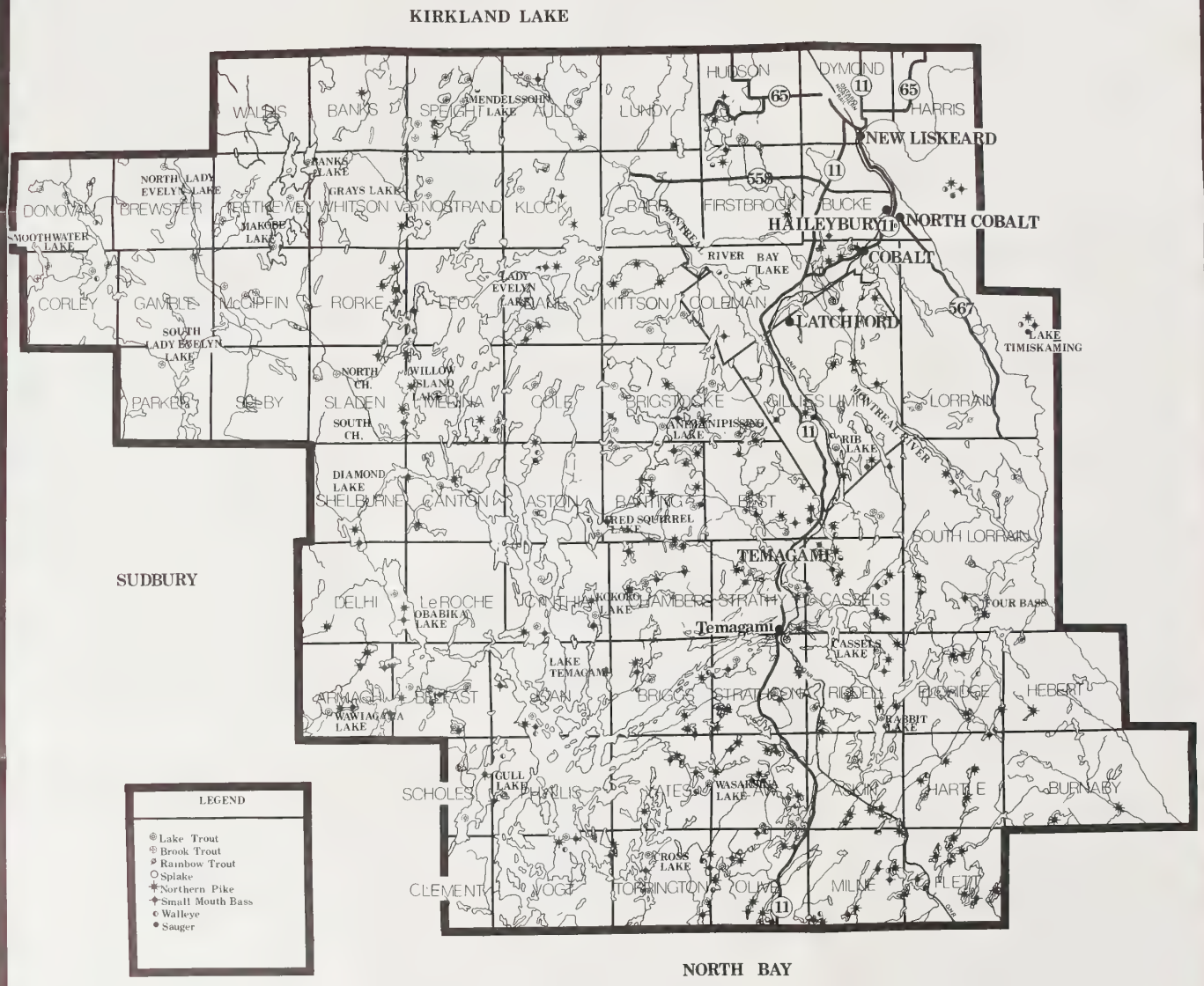
Lakes with Outpost Camps : New Road Access will be restricted to protect tourism values.

Lake	Township
Boyce	Flett
Chambers	Chambers
Chris Willis	Sladen
Diamond	Canton
Eagle	Cole
Fanny	Flett
Florence	Parker
Forlise	Flett
Fry	Armagh
Gull (2 locations)	Scholes
Hansen	Chambers
Lady Evelyn River	Sladen
Mackenzie	Flett
Simpson	Flett

Temagami District

Map 3

Sportfish Species Distribution



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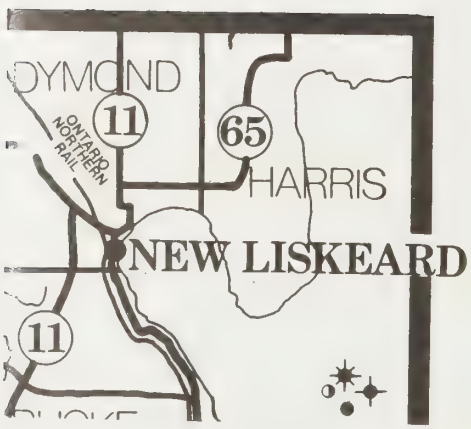

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